WHAT IS CLAIMED IS:

1. A digital subscriber line communicating system for communicating between a transmitting side and a receiving side through a communication line, comprising:

a sliding window generating unit for generating a sliding window based on a timing signal representing a periodical noise duration; and

a sliding window transmitting unit for transmitting modulated symbol according to said sliding window through said communication line to said receiving side.

2. The digital subscriber line communicating system according to claim 1, wherein said periodical noise duration is caused with a cross-talk noise on said communication line from an another transmission system using time compression modulation.

3. The digital subscriber line communicating system according to claim 1, wherein both said sliding window generating unit and said sliding window transmitting unit are located in said transmitting side.

4. The digital subscriber line communicating system according to claim 1, wherein said sliding window is generated in such a way that inside modulated symbol of said sliding window is received by said receiving side when said receiving side is in a far end cross-talk duration.

5. The digital subscriber line communicating system according to claim 1, wherein said transmission side is a central office and said receiving side is a remote terminal;

said central office comprising:

a timing signal generating unit for generating said timing signal synchronized with said transmission system which interferes said central office and said remote terminal;

said sliding window generating unit being operatively connected to said timing signal generating

unit, and said sliding window being a downstream sliding window indicating the phase of noise condition of said remote terminal; and

said sliding window transmitting unit transmitting modulated symbols according to said downstream sliding window through said communication line to said remote terminal; and

said remote terminal comprising:

a sliding window receiving unit for receiving modulated symbols according to said downstream sliding window from said central office;

said downstream sliding window indicating cross-talk durations due to said TCM ISDN transmission at the remote terminal.

6. The digital subscriber line communicating system according to claim 5, wherein said downstream sliding window is generated in such a way that inside symbol of said downstream sliding window is received by said remote terminal in a first cross-talk duration determined with a far end cross-talk duration at said remote terminal.

7. The digital subscriber line communicating system according to claim 5, wherein said first cross-talk duration is within a prior half of each cycle of said timing signal, and a second cross-talk determined with a near end cross-talk duration at the remote terminal, is within a latter half of each cycle of said timing signal,

inside of said downstream sliding window being formed within said first cross-talk duration.

8. The digital subscriber line communicating system according to claim 7, wherein, during timing recover training between said central office and said remote terminal, inside symbol of said downstream sliding window is formed by a first kind of signal, and outside symbol of said downstream sliding window is formed by a second kind of signal, said first kind of signal and said

second kind of signal being obtained by modulating a carrier signal but being different in phase by a predetermined angle.

9. The digital subscriber line communicating system according to claim 6, wherein when the first modulated symbol is synchronized with the head of one cycle of said timing signal, said central office comprises a duration discriminating unit for discriminating whether N-th modulated symbol belongs to inside or outside of said downstream sliding window.

10. The digital subscriber line communicating system according to claim 5, wherein said central office includes a transceiver comprising said timing signal generating unit and said sliding window generating unit.

11. The digital subscriber line communicating system according to claim 1, wherein said transmission side is a remote terminal and said receiving side is a central office, said remote terminal comprising:

a timing signal receiving unit for receiving a timing phase via received modulated symbol according to a downstream sliding window from said central office, said timing signal being synchronized with a transmission system which interferes said central office and said remote terminal;

said sliding window generating unit being operatively connected to said timing signal receiving unit, and said sliding window being an upstream sliding window indicating the phase of noise condition of said central office; and

a sliding window transmitting unit for transmitting modulated symbols according to said upstream sliding window through said communication line to said central office;

said upstream sliding window indicating a cross-talk duration due to said TCM ISDN transmission at said central office.

12. The digital subscriber line communicating

system of claim 11, wherein said upstream sliding window is generated in such a way that an inside symbol of said upstream sliding window is received by said central office in a third cross-talk duration determined with a far end cross-talk duration at said central office.

13. The digital subscriber line communicating system according to claim 12, wherein a fourth cross-talk duration determined with a near end cross-talk duration at the central office is within a prior half of each cycle of said timing signal, and said third cross-talk duration is within a latter half of each of said timing signal,

inside of said upstream sliding window being formed within said third cross-talk duration.

14. The digital subscriber line communicating system according to claim 12, wherein when the first modulated symbol is synchronized with the head of one cycle of said timing signal, said remote terminal comprises a duration discriminating unit for discriminating whether N-th modulated symbol belongs to inside or outside of said upstream sliding window.

15. The digital subscriber line communicating system according to claim 1, wherein, during training between said transmitting side and said receiving side, a training sequence switching symbol is transmitted from the transmitting side in such a way that the receiving side receives the head of said training sequence switching symbol during a far end cross-talk duration.

16. The digital subscriber line communicating system according to claim 1, wherein the number of bits to be transmitted per a carrier signal corresponds to a signal to noise ratio for said carrier signal, only the modulated symbols received completely inside of a near end cross-talk duration at the receiving side being used to measure the NEXT duration S/N, and only the inside modulated symbols of the sliding window at the receiving side being used to measure the FEXT duration S/N.

17. The digital subscriber line communicating system according to claim 16, further comprising a sliding window bitmap transmission system for transmitting data symbols only inside of said sliding window with transmitting capacity determined by the S/N measurement in the inside of said sliding window at the receiving side.

18. The digital subscriber line communicating system according to claim 17, further comprising a standard transmission system, wherein, according to said standard transmission system, data symbols are transmitted in both inside and outside of said sliding window with transmitting capacity determined by the S/N measurement in NEXT duration at the receiving side; and wherein the system having the larger transmitting capacity is selected to perform the communication.

19. The digital subscriber line communicating system according to claim 16, comprising modified sliding window bitmap transmission system for transmitting data symbols in both inside and outside of said sliding window, and the inside data symbols are transmitted with transmitting capacity determined by the S/N measurement in the inside of said sliding window and the outside data symbols are transmitted with transmitting capacity determined by the S/N measurement in the NEXT duration at the receiving side.

20. The digital subscriber line communicating system according to claim 17 ~~or 18~~, wherein, according to one of said sliding window bitmap transmission system, at least a pilot tone used for synchronization of timing is transmitted outside of said sliding window.

21. The digital subscriber line communicating system according to claim 17 ~~any one of claims 17 to 19~~, wherein, according to one of said sliding window bitmap transmission system and said modified sliding window bitmap transmission system, a first predetermined number

of super frames, each of which is composed of second predetermined number of modulated symbols and a synchronizing symbol, constitute a single unit, said single unit being synchronized with an integer multiple of one cycle duration of said timing signal, and one of said synchronizing symbols in said single unit, i.e., an inverse synchronizing symbol, is made different from other said synchronizing symbol in order to maintain said single unit to be synchronized between said central office and

said remote terminal, and said inverse synchronizing symbol in N-th super frame of said super frames is received in the FEXT duration at the receiving side.

22. The digital subscriber line communicating system according to claim 21, wherein, said N-th super frame is 4-th super frame for downstream and first super frame for upstream, and said first predetermined number of super frames is 5, said second predetermined number of modulated symbols is 68.

23. A transceiver in a central office connected through a communication line to a remote terminal, said transceiver comprising:

a timing signal generating unit for generating said timing signal representing a periodical noise duration;

a sliding window generating unit, operatively connected to said timing signal generating unit, for generating a downstream sliding window indicating the phase of noise condition of said remote terminal; and

a sliding window transmitting unit for transmitting modulated symbols according to said downstream sliding window through said communication line to said remote terminal.

24. The transceiver according to claim 23, wherein said periodical noise duration is caused with a cross-

talk noise on said communication line from an another transmission system using time compression modulation.

25. The transceiver according to claim 23, wherein said downstream sliding window is generated in such a way that an inside symbol of said downstream sliding window is received by said remote terminal in a far end cross-talk duration at said remote terminal i.e., R-FEXT duration.

26. The transceiver according to claim 25, wherein said first cross-talk duration is within a prior half of each cycle of said timing signal, and a second cross-talk duration determined with a near end cross-talk duration at the remote terminal is within a latter half of each cycle of said timing signal.

inside of said downstream sliding window being formed within said first cross-talk duration.

27. The transceiver according to claim 26, wherein, during timing recover training between said central office and said remote terminal, inside symbol of said downstream sliding window is formed by a first kind of signal, and outside symbol of said downstream sliding window is formed by a second kind of signal, said first kind of signal and said second kind of signal being obtained by modulating a carrier signal but being different in phase by a predetermined angle.

28. The transceiver according to claim 25, wherein when the first modulated symbol is synchronized with the head of one cycle of said timing signal, said central office comprises a duration discriminating unit for discriminating whether N-th modulated symbol belongs to inside or outside of said downstream sliding window.

29. A transceiver in a remote terminal connected through a communication line to a central office, said transceiver comprising:

a timing signal receiving unit for receiving a timing phase via received modulated symbol according to a downstream sliding window from said

central office, said timing signal being synchronized with a transmission system using time compression modulation which interferes said central office and said remote terminal;

a sliding window generating unit, operatively connected to said timing signal receiving unit, for generating an upstream sliding window indicating the phase of noise condition of said central office; and

a sliding window transmitting unit for transmitting modulated symbols according to said upstream sliding window through said communication line to said central office;

said upstream sliding window indicating cross-talk duration due to said TCM ISDN transmission at said central office.

30. The transceiver according to claim 29, wherein said upstream sliding window is generated in such a way that inside symbol of said upstream sliding window is received by said central office in a far end cross-talk duration at said central office i.e., C-FEXT duration.

31. The transceiver according to claim 30, wherein a near end cross-talk duration at the central office, i.e., C-NEXT duration, is within a prior half of each cycle of said timing signal, and said third cross-talk duration is within a latter half of each of said timing signal,

inside of said upstream sliding window being formed within said third cross-talk duration.

32. The transceiver according to claim 30, wherein when the first modulated symbol is synchronized with the head of one cycle of said timing signal, said remote terminal comprises a duration discriminating unit for discriminating whether N-th modulated symbol belongs to inside or outside of said upstream sliding window.

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